Beauty, Form and Function in Typography
http://www.typoday.in

Analysis of Malayalam hand-painted street lettering styles

Unnati Kotecha, Ek Type, Mumbai, India. unnatiikotecha@gmail.com
Maithili Shingre, Ek Type, Mumbai, India. ps.maithili@gmail.com

Abstract: In this paper, we document and categorize Malayalam hand-painted street lettering styles based on their morphological features and attempt to analyze significantly different lettering styles found in the Malayalam script.

Keywords: *Hand-painted signs, Lettering styles, Malayalam letterforms*

1. Introduction

1.1 Hand-painted street lettering in Kerala

There was a time, not so long ago, when hand-painted film titles, posters and life-size hoardings filled the scapes of most cities and towns. Digital typesetting changed this scenario and printed material replaced a lot of these hand-painted signs. Yet Kerala is bestrewn with hand-painted signs, that too in a vast variety of styles. Apart from digitally typeset reading materials such as newspaper and books, the typographic palette of a Malayalam reader is filled with these hand-painted styles. They are seen on shop boards, street signages, wall graffiti, notice boards, political and religious propaganda, restaurant menus and advertisements among others.

These Malayalam street lettering styles vary according to the context. Advertisements follow the brand's graphic language, notices by government organizations generally have a formal calligraphic structure, and political signs have the most dynamic lettering with colourful and attractive compositions. In some places, it is also observed that the government notices and

informative signages are painted in cheerful bouncy lettering styles that use neutral colours, and political signs use generic lettering styles with colorful compositions.

Lettering styles can be classified based on different criteria. The classification can be based on aesthetics, census of the lettering artists, geographic location, letter structures, context, content and more. For this paper we have analysed the styles based purely on their morphological features. To do so, we sifted through innumerable photographs of ingenious hand-painted styles found across Kerala and picked out distinctly different ones.

1.2 General observations

The selected samples range from Light to Black weights with multiple variations in contrast. The widths span across ultra-condensed to extra-expanded, though, condensed and regular widths are more frequent. Some characters stand upright, while others lean to the left or right. Upon closer inspection, calligraphic styles have narrow apertures, while monolinear styles have narrow to open apertures. The axes range from 0º to 120º. Condensed styles usually follow the squarish or ovalish approach while the wider styles are circular.

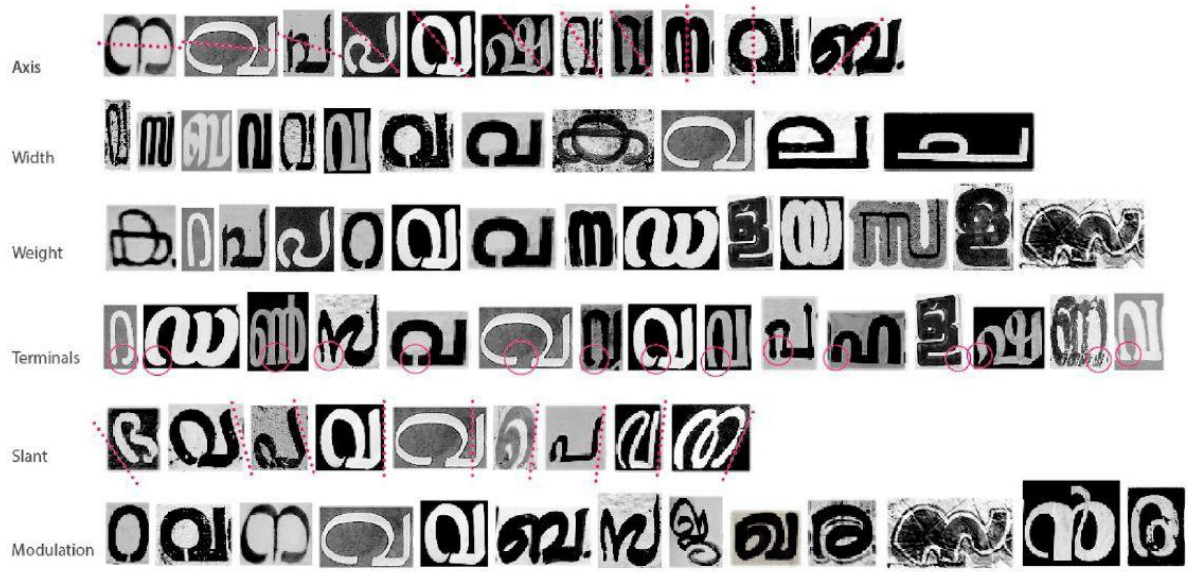


Figure 1. Variation of styles

It is observed that the content in these lettering styles is written in both, the old style script (Pazhaya Lipi പഴയ ലിപി) and the new style (reformed) script (Puthiya Lipi പുതിയ ലിപി). The old style script has a lot of conjuncts and ligated consonants with below-base matras. It occupies less space. The conjuncts in the reformed script are split into their consonant forms using a Chandrakala and separate signs are used for below-base matras. Hence it occupies much more space.

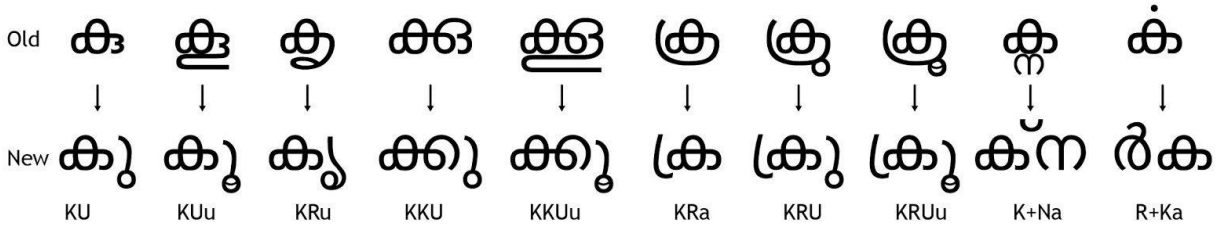


Figure 2. Comparison between Old script and reformed script

2. Anatomy of the Malayalam script

Malayalam does not have a well-known system of typographic terms, therefore, supplementary terminology has been developed to aid the morphological analysis and facilitate the explanation of letterform construction.

Terms from western typography, like baseline, ascender, descender, stem, apertures etc., that can be generalized for Latin and Malayalam, are used. Terminology based on construction of the Malayalam script is added. For eg: loop intersections, curvilinear joints. Words like loop, hook, horn and hair-pin form have been added to the vocabulary of visual forms.

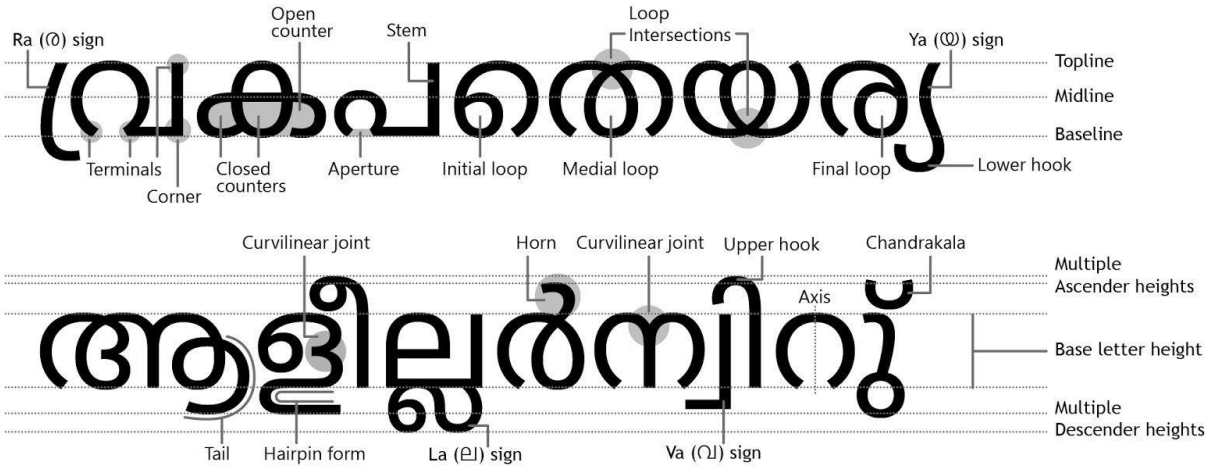


Figure 3. Anatomy of the Malayalam script

3. Analysis of Malayalam hand-painted lettering styles

In order to analyse them in greater detail, the styles have been classified into three broad categories,

1. Monolinear - letterforms having vertical and horizontal strokes of the same visual weight.
2. Modulated - letterforms having cyclic and predictable variations in the strokes, usually because of the tool used.
3. Ornamental - decorative letterforms that have varying stroke modulation and letter proportions.

The collected lettering samples are analysed based on certain basic parameters/morphological features used to analyse typefaces, like axis, weight, width, slant, terminals, apertures, counter spaces and contrast. Anatomical features such as loops,

joineries, ascender-descenders, midline, skeletal structure etc. are also taken into consideration. Selected styles from each of the categories are analyzed below.

3.1 Monolinear styles

The two distinct structures that are recurrent in Malayalam lettering are discussed first.

3.1.1. Structure no.1

Rational terminals that face inwards, towards the consecutive or preceding stroke, are the distinct feature of this structure. Multiple variations of this utilitarian style are found.

3.1.1.a

കെ. പി. വർഗീസ് & സൺസ്

Slant: Upright | Weight: SemiBold | Width: Regular | Midline: Moderate | Apertures: Too Narrow

This style with robust curves has short ascenders, very short horn in chillu letters and a flattened Chandrakala.

3.1.1.b

This style can be seen in a variety of weights and widths.

3.1.2. Structure no.2

Rational terminals that do not face inwards, relatively open apertures and tall base letter heights are distinct features of this style. Multiple variations of this neutral style are seen.

3.1.2a.

നിസ്കരിക്കുന്നവർക്ക് മാത്രം പ്രവേശനം

Slant: Upright | Weight: SemiBold | Width: Ultra-condensed | Terminals: Rational | Midline: High | Apertures: Narrow | Script: Mix of old and new

In this sample, conjuncts TRa(ത്ര) and PRa(പ്ര) fit within the base letter height, hence there are no descenders at all. The ascenders i.e., the horn in chillu letter and flat upper hooks of matra-I(ി) and the chandrakala are very short.

3.1.2b.

റസ്റ്റോറന്റ്

In this semi-condensed style with open apertures, loops of matra-E(േ) are conjoined. Conjunct is fitted into the base letter height. In the conjunct , small റ form is placed beside the character, which is rare.

3.1.2c.

ആയുർവ്വേ

In this denser, heavier version of the same style, it is interesting to see how the artist has drawn extremely heavy characters in such a condensed width. Counter spaces are quite

narrow, almost as though the strokes were separated by a thin line in some cases. The letters are tightly spaced. The terminals appear flared and slightly concave.

3.1.2d.

പ്രവേശന ടിക്കറ്റ് വരിശോധനയ്ക്ക് വിധേയമാക്കേണ്ടതാണ്.
പ്ലാസ്റ്റിക്, പാഴ്വസ്തുക്കൾ കാട്ടിൽ വലിച്ചെറിയരുത്.
ആഹാരം പാകം ചെയ്യുന്നതും, വനത്തിൽ തീ ഉപ-
യോഗിക്കുന്നതും നിരോധിച്ചിരിക്കുന്നു.
പിക്നിക് സ്പോട്ടിനകത്ത് മദ്യം കൊണ്ടുവരുന്നതും
മദ്യപിക്കുന്നതും നിരോധിച്ചിരിക്കുന്നു.

This example shows two widths. The first two lines are more condensed than the others. The form of the matra-E(േ) is quite unique, as the loops are petal shaped. Ascenders and descenders are short, yet the chandrakala is tall. The horn in chillu letters(ൽ,ൽ) is very short. Vowel-U(ു), tail of vowel-Aa(ാ), and some vertical conjuncts(, യ്,) that usually come below the baseline, almost fit into the base letter height. Though the line-spacing is irregular, these features have resulted in tighter line-spacing.

3.1.3.

credits: Heico Neumeyer (flickr)

ബീച്ചിൽ മദ്യപാനം കർശനമായി നിരോധിച്ചിരിക്കുന്നു

Slant: Upright | Weight: Bold | Width: Condensed | Terminals: Rounded | Midline: High | Apertures: Narrow | Script: Mix of Old and New

In this casual style, the loops of Ba(ബ), Chillu La(ൽ) and Ssa(ശ) are conjoined with the neighbouring strokes. Loop intersections in Chillu La(ൽ), Ya(യ) are flattened. Horns in chillu letters are short, and the ascenders and descenders are shorter. Lower and upper hooks in matra-I(ി) and Ya sign have been flattened. Matra-Ii(ീ) touches the base character. Letter-spacing and letter-widths are adjusted according to the available space. For example, it is interesting to note how the matra-Aa(ോ) in the first line is simplified to occupy less space whereas the same form in the second line is not.

3.1.4.

credits: Paul Hunt (flickr)

കീയാസൂത്രണപ്ര

Slant: Upright | Weight: Regular | Width: Extra-expanded | Terminals: Rounded | Midline: High | Apertures: Narrow | Script: Mix of Old and New

In this style, the letterforms have an almost geometric construction. Terminals curve inwards and loop intersections in Ya(യ) and Ta(ത) are flattened. The width of the intermediate counters in Sa(സ) and Nna(ണ) has been reduced. This style has tall ascenders and very short descenders.

3.1.5.
This style with a capsular structure is also frequent. Vertical curves in this style are made up of straight lines, and their terminals don't curve inwards at all. They face straight, either upwards or downwards.

3.1.5a.

റെഡിമെയ്ഡ സെന്റർ

Slant: Upright | Weight: Black | Width: Condensed | Terminals: Rational | Midline: High | Script: Mix of Old and New

This heavy style is compact with squarish structures and minimal counter spaces. Letter-spacing is tight with short ascenders and descenders. The chandrakala and horn are flat.

3.1.5b.

അസിസ്റ്റന്റ് ലേണർ ആഫീസറുടെ കാര്യാലയം

This is a medium weight and ultra-condensed version of the above style. Matra-I and chandrakala are moderate in height, and so is the midline.

3.1.6.

ുണാധയുള്ളവർ ക്ക... ക്ഷയുടെ പുതിയ

Slant: Upright | Weight: Medium | Width: Condensed | Terminals: Rational | Midline: High | Script: New

This style is constructed using straight lines with soft outer corners. Terminals don’t curve inwards. Hook of the matra-U(ു) is removed and is straightened into a line. Corners are smooth on the outside and sharp on the inside. Loop intersections in Ya(യ), Ta(ത) are flattened. The hairpin form in Lla(ള), is modified into a triangular form that fits into the base letter height.

3.2 Modulated styles

For a script that does not have an inherent tradition of modulated calligraphy, Malayalam has an abundance of modulated lettering styles, each different from the other.
Modulation produced by a left canted tool is frequent, whereas modulation produced by right canted tool is rare. Latin font inspired modulation is also found in some samples.

3.2.1.

ഈ കോമ്പൗണ്ടിന്റെ അകത്ത് അന്യ വാഹനങ്ങൾ പാർക്ക് ചെയ്യുന്നത് കർശനമായി നിരോധിച്ചിരിക്കുന്നു

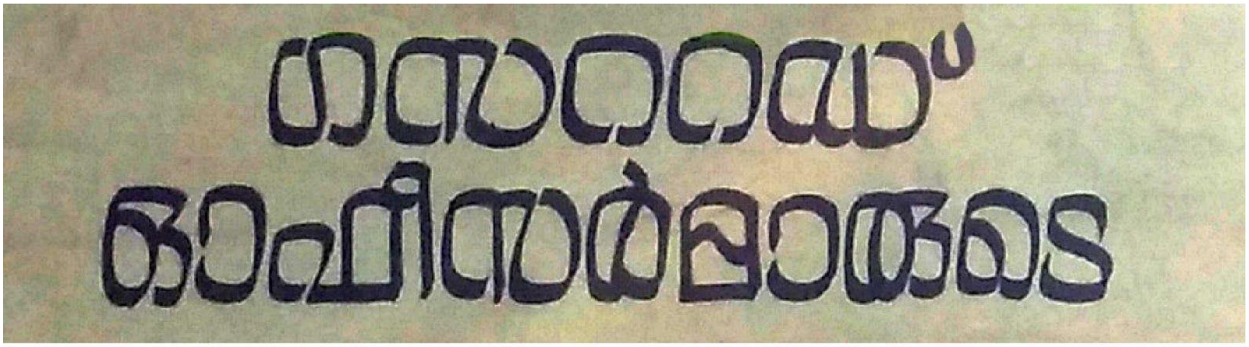
Slant: Upright | Axis: 45°to 55° approx | Weight: Bold | Contrast: Medium | Width: Semi-condensed | Midline: Moderate to high | Apertures: Too Narrow | Script: Old

This rotund style is distinguished by terminals that curl inwards like a flick, almost touching the facing stroke. These terminals enhance the circularity of the curves. Apertures are closed in Ra(ര), Chillu Ra(ർ), Ta(ത). Chandrakala is drawn touching the character and looks almost like a circle. Vowel-I(ഇ) is fit into the base letter height. The ascenders and descenders are short, letters tightly spaced and the line spacing is less, lending the style its dense texture.

3.2.1.a

This style is also seen in various weights and inclinations.

3.2.2.



ഗസറഡ് ഓഫീസർമാരുടെ

Slant: Upright | Axis: 35°to 48° approx | Weight: Regular | Contrast: Medium | Width: Regular | Midline: High | Apertures: Too Narrow

The axis imparts thicker horizontal strokes and thinner vertical strokes to this style. Chillu Ra(ർ), matra-shortE(െ) and Ta(ത) have completely closed apertures. The squarish structure gives it its characteristic boxy look. Curvilinear joineries in letters Sa(സ) and Dda(ഡ) are sharp, and are triangular in vowelO(ഓ) and old-style Ra+U(രൂ). Intermediate counters in Sa(സ) and Dda(ഡ) are significantly smaller. Matra-Ii(ീ) touches the letter. Ascenders are short. Letters are tightly spaced.

3.2.3.

credits: Danny Birchall,(flickr)

വിജയിപ്പിക്കുക

Slant: Upright | Axis: 0°to 10° approx | Weight: Regular | Contrast: High | Width: Expanded | Midline: High | Apertures: Too Narrow | Script: Old

This curvy tightly spaced style is seen in varied widths and contrasts. Due to the axis, stems and matra-I(ി) are drastically slim, giving the text a reverse contrast. In Ja(ജ), the final loop is bigger and descends below the baseline.

3.2.4.

അതിരപ്പിള്ളി വനസംരക്ഷണ സമിതി

Slant: Upright | Axis: 25°to 45° approx | Weight: Regular | Contrast: Medium | Width: Expanded | Midline: Moderate to high | Apertures: Open

The asymmetrical starting and ending strokes are a prominent feature of this style. Starting curves are straight vertical strokes, whereas the ending curved strokes are wide and circular, with terminals curling inwards. Loop of Ta(ത), center form in Ka(ക) are wide and Lla(ള) is made to fit into the base letter height. Letters slope slightly and letter-spacing is tight.

3.2.5.

വളങ്ങൾ, കീടനാശിനികൾ മുതലായവക്ക്..

Slant: Upright | Axis: 20°to 40° approx | Weight: Light | Contrast: Low | Width: Condensed | | Midline: Too high | Apertures: Almost closed | Script: Old

This style is characterised by overwhelmingly large loops and tightly spaced letters. An interesting blend of extremely narrow and huge counters is seen in this style. The massive loops are conjoined with the rest of the character in NgaNga( ), chillu Lla(ൾ), Ssa(ശ) and Lla(ള). Lla(ള) fits into the base letter height. Ka(ക), Ta(ത) and Ya(യ) have large intermediate counters. Corners of La(ല) protrude outwards. The tool is held almost vertically giving it a reversed contrast.

3.2.6.

അത്യാഹിത വിഭാഗം 24 മണിക്കൂറും പ്രവർത്തി

credits: Paul Hunt (flickr)

Slant: Left inclined | Axis: 45°to 55° approx | Weight: Medium | Contrast: Medium | Width: Extra-condensed | Midline: Moderate | Script: Old

In this unique left inclined style, the initial stroke is straight instead of being curved whereas the end terminal is a curved stroke that comes diagonally inwards, resulting in uncommonly thin terminals. The counter spaces are well balanced. The stylised Matra-I(ി) has a flat, wide upper hook and a wavy transition from the horizontal to the vertical stroke.

3.2.7.

ഗോൾഡൻ

Slant: Upright | Axis: 45°to 55° approx | Weight: Regular | Contrast: Slightly high | Width: Expanded | Apertures: Narrow

It’s very interesting how the lettering artist has managed to make this style curvy, sharp and squarish at the same time. On the top left of each character, the letters have outward going serif-like horizontal strokes that are alien to the Malayalam script. The initial vertical curves are drawn as straight lines and the transition of the straight lines to curves is very sharp. Unlike the starting flattened curves, the ending vertical curves are fuller and rounder. Centre stroke of the letter Ga(ഗ) and Chillu Lla(ൾ) is serpentine. MatraE(േ) is simplified by removing the lower loop.

3.2.8.

പലചരക്ക് വ്യാപാരം

Slant: Upright | Axis: 50°to 60° approx | Weight: Bold | Contrast: More than medium | Midline: Moderate | Apertures: Narrow | Width: Extra-condensed

In this tall condensed style, the vertical curves are straightened to vertical lines.The terminals turn diagonally inwards, giving the structure a Blackletter-like feel. There is a slight wave at the joinery of the horizontal and vertical strokes.This treatment gives it an artistic flair despite its fairly rectangular and rigid structure.

3.2.9.

മികച്ച ഔഷധ

Slant: Upright | Axis: 35°to 45° approx | Weight: Medium | Contrast: High | Width: Semi-condensed | Midline: High | Apertures: Open | Script: Old

The terminals and curvy smooth corners give this calligraphic style a decorative appeal. Contradictory to the inward curving terminals, initial terminals have a thin outward extension.

3.2.10.

പരസ്യം പതിക്കരുത്

Slant: Upright | Axis: 35°to 45° approx | Weight: Regular | Contrast: Medium | Midline: Moderate | Width: Regular | Script: Old

This style is characterised by its peculiar terminals that have an outward flourish at the baseline and stems that have a thin swash on top. This style has a huge Chandrakala.

3.2.11.

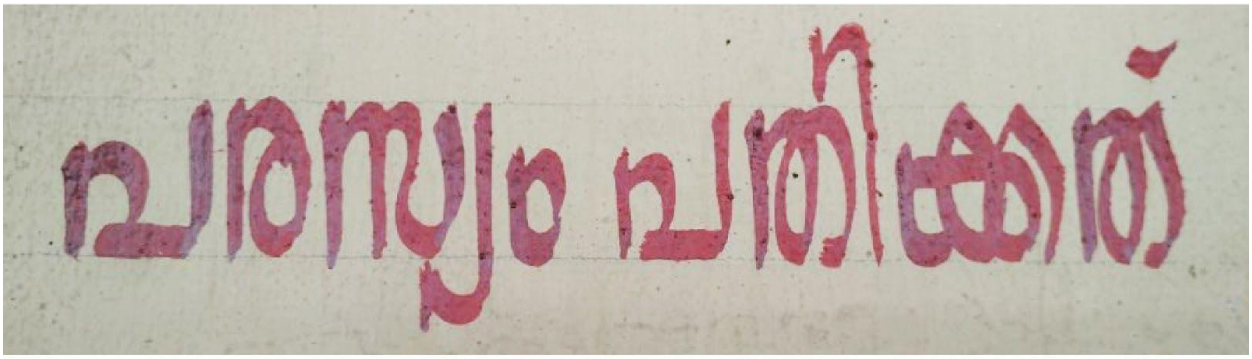
credits: Paul Hunt (flickr)

തിരു:നോർത്ത് ജില്ലാ

Slant: Upright | Axis: 50°to 70° approx | Weight: ExtraBold | Contrast: High | Width: Condensed

This compact style has slab-serifs on all terminals and a unique leaf-like treatment for the horn in chillu Ra(ർ). Combining a pliable modulated structure with rigid slab serifs gives this sample a very distinct look. Matra-I(ി) is quite tall. La sign is simplified.

3.2.12.



പരസ്യം പതിക്കരുത്

Slant: Upright | Axis: 25°to 45° approx | Weight: Regular | Contrast: Medium | Width: Condensed

In this style, each letter begins with a vertical line. The second stroke branches out from it creating a spur-like structure. These spurs, though alien to Malayalam, add rhythm and stability.

3.2.13.

credits: Paul Hunt (flickr)

ാർപ്പറേഷൻ ഹെ

Slant: Upright | Weight: Heavy | Contrast: Extremely High | Width: Expanded | Midline: Low | Apertures: Very narrow

This style has the copperplate-like modulation seen in Malayalam text typefaces. Slightly flared thin terminals, small loops, narrow apertures, airy counters and high contrast add to the grace of this style. Origin of this modulation which is not tool based, takes us back to the arrival of Christian Missionaries in the 19th century, when traditional monolinear forms transformed to copperplate-like modulated forms due to the influence of Roman scripts. However, this influence persists even today, and one can see a large number of such modulated text typefaces and lettering styles too.

3.3 Ornamental styles

Some ornamental styles are like handwriting. Letters might not sit on one baseline, and may not conform to a grid. Although weights and widths might be inconsistent, these eye-catching styles have a unique rhythm and texture of their own.

3.3.1.

1, അവയുടെ സ്വാഭാവികഭക്ഷ്യപ്രവണത ഇല്ലാതാക്കുന്നു.
2, മനുഷ്യനിർമ്മിതഭക്ഷ്യപദാർത്ഥങ്ങൾ അവയുടെ
ദഹനേന്ദ്രിയവ്യവസ്ഥക്ക് അനുയോജ്യമല്ല.
3, അവ സന്ദർശകരെ ശല്യപ്പെടുത്തുന്നു.

In this calligraphic style, character widths and apertures continuously change according to the temperament of the artist. Angle of the tool, and hence the axis, changes with each letter. The curves are right inclined, whereas vertical lines are upright. It seems like the upright vertical strokes restrain the flow and speed induced by the right inclined curves. Initial and final loops are big and distinctly disjoint. Even when seated on the baseline, heights of letters like Sa(സ), Ta(ത), Ya(യ) seem to vary. Short ascenders and descenders facilitate smaller line heights and hence a denser text setting.

3.3.2.

മുന്നറിയിപ്പ്
ഇവിടെ വെള്ളത്തിൽ വീണ് നിരവധി പേർ മരിച്ചിട്ടുണ്ട്.
നിയന്ത്രണ രേഖ മറികടന്ന് പോകരുത്.
ഇവിടെ പ്ലാസ്റ്റിക് മാലിന്യങ്ങൾ നിക്ഷേപിക്കരുത്.

Character widths, apertures and axes vary in this energetic and bouncy calligraphic style. First line is the widest while the fourth line is extremely condensed. The matras-I and Ii (ി,ീ) extend way below the baseline. Chandrakala starts as a curve but ends as a straight line extending higher. Hair-pin forms of vowel-I(ഇ), Lla(ള) are made extremely small and curvy. Some initial and final loops are open. In letters like Na(ന), Sa(സ), curvilinear
joineries stretch almost till the baseline. Also, the corners (marked by the joining of curve to a horizontal segment) in Va(വ),Pa(പ) and La(ല) are smooth and nearly rounded.

3.3.3.

credits: Paul Hunt (flickr)

ദൈവിക രോഗശാന്തി ശുശ്രൂഷയും
പുത്തരിക്കണ്ടം മൈതാനത്ത

A rare right canted axis gives this style an unusual texture. Ascenders and descenders are short. Curves are inconsistently flattened out, resulting in irregular widths. In some letters, counters are circular, whereas the outer curves are squarish. This treatment makes the diagonals slightly heavy.

3.3.4.

credits: Paul Hunt (flickr)

ജില്ലാ

In this bold, expanded style, straight lines of letter La(ല) are changed into curves. Weight distribution is uneven. Ja(ജ) is drawn differently with an open final loop. La sign is simplified. Terminals are rounded with a single sharp point.

3.3.5.

ഡൊമിനിക്ക്പ്രസന്റേഷ

In this condensed yet circular style, vertical bars of matra-I are transformed into curves. Weight distribution is uneven. Letter Ka(ക) is distinctly different, having only three counters as opposed to four. Chandrakala is tilted. Old-style conjunct PRa(പ) fits into the base letter height.

3.3.6.

സമ്മേളനം

This graffiti-like style has uneven weight distribution with inconsistent widths and inclines. The top horizontal curves are very thick. MatraE(േ) is simplified by removing its lower loop. The loop of Lla(ള) is open and its hairpin form is merged into a single line. The overlapping stubby letters with these distinct features make the style look cheerful.

3.3.7.

credits: Paul Hunt (flickr)

ജനറൽകൗൺസിൽ

Even though most letters sit on the baseline, their heights are varied in this offbeat style. Skeleton of Ja(ജ) is simplified, and its final loop is removed. The midbar of Na(ന) does not touch the baseline, and Matra-I(ി) is characteristically squarish.

3.3.8.

ഇനി ഈ ജില്ലയിൽ പ്ലാസ്റ്റിക് മാലിന്യങ്ങളില്ല

Letter widths are extremely varied in this rapid handwriting-like style not having a fixed base or toplines. Initial loops are open. Small forms of the conjuncts are tiny and letter proportions irregular. In vowel-I(ഇ), the hairpin form is angular and letter Ja(ജ) has a big open final loop.

4. Observations

Though certain letter structures are consistent across modulated and monolinear lettering styles, variations are widely seen in the structures of modulated and ornamental styles.
We find innumerable variations in structure of even a single character across different styles. Given below are variations of Pa(പ) as found in our references (Figure 4).

Diverse styles can be created with variations in these forms and parameters like slant, width, weight, axis and contrast.

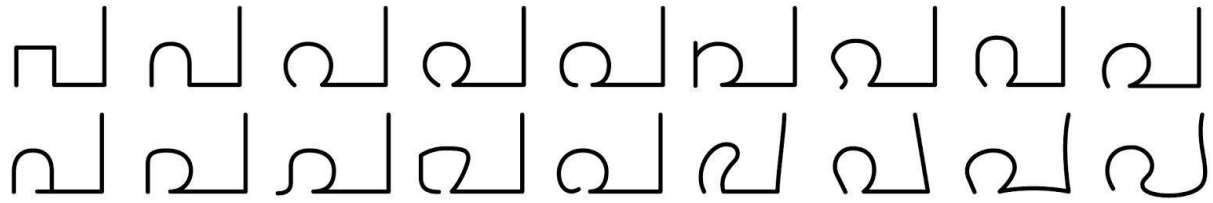


Figure 4. Skeletons of Pa(പ)

Lettering is a flexible medium. It allows painters to adapt, modify and improvise letterforms based on the content, available space and their individual style or preference. This leads to structural modifications, unique treatments and compositions. In case of Malayalam, brushes used by street painters impart a distinct modulation to the script, which is unlike the copperplate like modulation of popular Malayalam text typefaces. Latin inspired display fonts are commonly seen in Malayalam. Serifs, alien to Malayalam script are being adopted increasingly in display typography for the sake of variety(Hashim P. M., 2011).

5. Conclusion and future scope of work

"Inspiration. From real life. I open my eyes and I travel and I look. And I read everything."
-Erik Spiekermann

Lettering as a public art is primarily concerned with communication through language. Like language itself, it is subject to convention and tradition requiring widely accepted standards of form and practice (Michel Harvey, 1975). As a private art it maybe a source of pleasure and satisfaction for those who practice its exacting skills. As type designers, we feel that these lettering artworks by skilled artists are lying dormant, awaiting a new lease of life; to be redrawn and repurposed. They have their own identity, features and quirks. Insights from such styles and techniques aid and augment digital type design. Additionally, they can facilitate the generation of new ideas for calligraphy, lettering and sign-board painting.

We also wish to explore further and study these styles based on their content and context, while being conscious of the thought put in by the lettering artists. At the same time, we hope that this paper will help people appreciate the contribution of street artists and hand lettering to the typographic landscape of Malayalam.

References

Hashim P. M. (2011) Birth of a typeface, TypoDay 2011
G. V. Sreekumar (1991) IDC Ajay- Type Design in Malayalam, IDC Project
D. Udaya Kumar (2010) Transformation of Tamil letterforms from Palm leaf manuscripts to early Letterpress printing
Michel Harvey (1975) Lettering Design
Malayalam script, Adoption of new script for use (1971)
http://unicode.org/L2/L2008/08039-kerala-order.pdf
Malayalam keyboard layout and character encoding (2001)
http://www.keralabhashainstitute.org/sites/default/files/inline-files/malayalam%20standardization%20report_2.pdf